



"The ART of Noise Control"

For your local ArtUSA Representative

Call: 1-888-454-6973

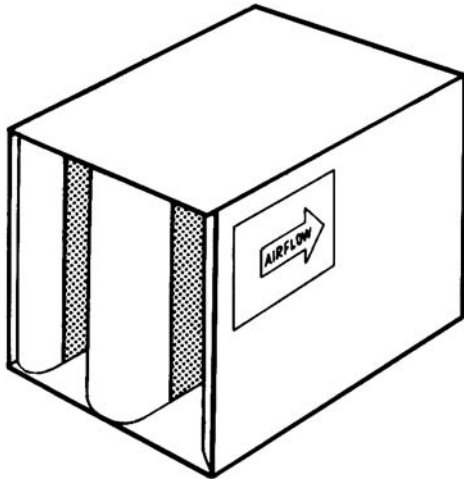
Internet: www.artusaindustries.us

Sound Attenuator

NO. 758-91

SUPERSEDES NO. 758-89

ENGINEERING DATA SHEET



MODEL LP

RECTANGULAR

NOMENCLATURE EXAMPLE:

WIDTH	HEIGHT	LENGTH	MODEL
24	24	3	LP

ArtUSA Acoustics sound attenuators are engineered to achieve a maximum insertion loss with a minimum pressure drop. ArtUSA Acoustics sound attenuators feature airfoil design for efficient aerodynamic performance, as well as superior acoustical materials and totally galvanized steel construction, guaranteeing excellent reliability and performance.

MODEL NO.	OCTAVE BANDS	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	CENTER FREQUENCY (Hz)	63	125	250	500	1000	2000	4000	8000
	FACE VELOCITY FPM	DYNAMIC INSERTION LOSS IN DECIBELS							
3LP	-1500	2	5	10	17	25	25	13	8
	-1000	3	5	9	17	25	25	13	8
	0	2	4	9	17	24	25	14	9
	+1000	1	4	9	16	24	26	17	11
	+2000	0	3	9	16	23	26	17	10
5LP	-1500	2	7	16	34	46	35	18	12
	-1000	3	7	15	33	46	35	18	12
	0	3	4	13	31	44	37	19	12
	+1000	3	4	13	30	43	37	20	12
	+2000	2	4	12	28	41	38	20	12
7LP	-1500	2	8	19	44	49	43	19	10
	-1000	2	7	18	42	50	45	20	11
	0	2	6	16	39	55	47	23	13
	+1000	2	6	15	37	53	46	23	14
	+2000	1	5	14	35	52	47	24	14
10LP	-1500	7	12	26	53	59	58	36	23
	-1000	6	11	25	52	60	60	36	23
	0	5	10	24	49	60	59	35	21
	+1000	5	9	23	46	60	60	36	22
	+2000	5	10	23	45	60	60	37	22

THIS TABLE CONTAINS BOTH FORWARD (+) AND BACKWARD (-) FLOW ACOUSTIC AND AERODYNAMIC RATINGS BASED ON TEST RESULTS MEASURED IN ACCORDANCE WITH ASTM E477. COPIES OF THESE TEST REPORTS CAN BE FURNISHED UPON REQUEST.



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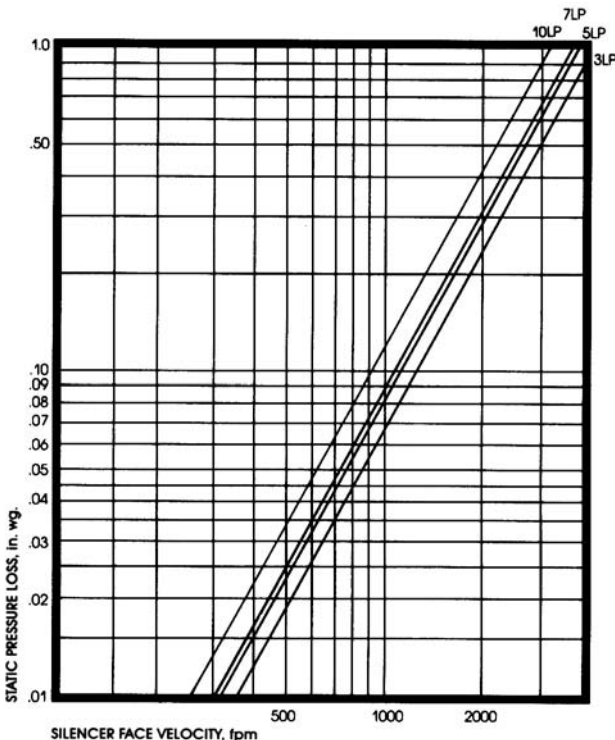
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RECTANGULAR
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AIR FLOW RATING FOR THE 12 X 12 SIZE, SHADED, REPRESENTS BOTH CFM AND FACE VELOCITY IN FPM.
USE THIS TO GET THE RATING FOR MULTIPLE MODULE SILENCERS.

MODEL	3LP	0.05	0.10	0.15	0.20	0.30	0.40	0.50	0.60	0.75	0.90	1.00	1.10
	5LP	0.06	0.13	0.20	0.28	0.42	0.56	0.70	0.84	1.05	1.27	1.40	1.55
	7LP	0.07	0.14	0.21	0.31	0.47	0.62	0.78	0.94	1.17	1.40	1.56	1.72
	10LP	0.10	0.20	0.30	0.46	0.67	0.94	1.17	1.41	1.76	2.11	2.34	2.58
SIZE W x H	FACE AREA	AIR FLOW IN CFM											
6 x 12	0.50	457	646	791	976	1195	1398	1563	1712	1914	2097	2210	2318
6 x 24	1.00	913	1291	1581	1952	2390	2795	3125	3423	3827	4193	4419	4635
6 x 36	1.50	1340	1937	2372	2928	3585	4193	4688	5135	5741	6290	6629	6953
12 x 12	1.00	913	1291	1581	1952	2390	2795	3125	3423	3827	4193	4419	4635
12 x 24	2.00	1826	2582	3162	3904	4780	5590	6250	6846	7654	8386	8838	9270
12 x 36	3.00	2739	3873	4743	5856	7170	8385	9375	10269	11481	12579	13257	13905
18 x 12	1.50	1370	1937	2372	2928	3585	4193	4688	5135	5741	6290	6629	6953
18 x 18	2.25	2054	2905	3557	4392	5378	6289	7031	7702	8611	9434	9943	104292
18 x 30	3.75	3424	4841	5929	7320	8963	10481	11719	12836	14351	15724	16571	17381
18 x 36	4.50	4109	5810	7115	8784	10755	12578	14063	15404	17222	18869	19886	20858
18 x 48	6.00	5478	7746	9486	11712	14340	16770	18750	20538	22962	25158	26514	27810
24 x 24	4.00	3652	5164	6324	7808	9560	11180	12500	13692	15308	16772	17676	18540
24 x 36	6.00	5478	7746	9486	11712	14340	16770	18750	20538	22962	25158	26514	27810
24 x 48	8.00	7304	10328	12648	15616	19120	22360	25000	27384	30616	33544	35352	37080
30 x 24	5.00	4565	6455	7905	9760	11950	13975	15625	17115	19135	20965	22095	23175
30 x 36	7.50	6848	9683	11858	14640	17925	20963	23438	25673	28703	31448	33143	34763
30 x 48	10.00	9130	12910	15810	19520	23900	27950	31250	34230	38270	41930	44190	46350
36 x 36	9.00	8217	11619	14229	17568	21510	25155	28125	30807	34443	37737	39771	41715
36 x 42	10.50	9587	13556	16601	20496	25095	29348	32813	35942	40184	44027	46400	48668
36 x 48	12.00	10956	15492	18972	23424	28680	33540	37500	41076	45924	50316	53028	55620



Air flow ratings shown include static regain. Therefore if silencers are installed immediately before or after elbows, transitions, at the intake or discharge of the system, or without duct, allowance to compensate for such conditions must be included when calculating the operating pressure loss thru the silencer. Failure to make allowance for these conditions can add several velocity heads to the pressure loss of the system. All acoustic and aerodynamic performance obtained on 24" x 24" cross section production units.

SELF-GENERATED SOUND POWER RATINGS (PWL)

dB re 10⁻¹² WATTS

OCTAVE BAND		1	2	3	4	5	6	7	8
HZ		63	125	250	500	1000	2000	4000	8000
MODEL	FACE VELOCITY								
3LP	+2000	60	55	51	47	45	50	48	43
5LP	+1000	53	40	35	32	33	26	24	30
7LP	-1000	52	42	40	42	40	37	28	30
10LP	-2000	64	56	54	53	56	63	59	51

SELF-GENERATED SOUND RATINGS/FACE AREA ADJUSTMENT FACTORS

FACE AREA	.50	1	2	4	8	10	32	64	128
PWL ADJUSTMENT FACTOR, dB	-9	-6	-3	0	+3	+6	+9	+12	+15